

Atty. Docket No. PIA31180/DBE/US
Serial No: 10/750,248

Claims

Please amend the claims as follows:

1. (Withdrawn) A compound for removing polymers generated during etching process, comprising:

DIW, H₂SO₄, H₂O₂ and HF, which are inorganic chemicals.

2. (Withdrawn) The compound of claim 1, wherein DIW occupies by volume about 70.5% to about 80.5%.

3. (Withdrawn) The compound of claim 2, wherein DIW occupies by volume about 75.5%.

4. (Withdrawn) The compound of claim 1, wherein H₂SO₄ occupies by volume about 6.5% to about 8.5%.

5. (Withdrawn) The compound of claim 4, wherein H₂SO₄ occupies by volume about 7.5%.

6. (Withdrawn) The compound of claim 1, wherein H₂O₂ occupies by volume about 15% to about 19%.

7. (Withdrawn) The compound of claim 6, wherein H₂O₂ occupies by volume about 17%.

8. (Withdrawn) The compound of claim 1, wherein HF occupies by volume about 50 PPM to about 150 PPM.

9. (Currently amended) A method for removing polymers generated during etching processes, comprising the steps of:

Atty. Docket No. PLA31180/DBE/US
Serial No: 10/750,248

removing the polymers by using an inorganic compound including DIW, H_2SO_4 , H_2O_2 and HF;

forming a protective oxide film on a metal line, a via hole or a pad open area by using H_2O_2 ; and

protecting the metal line, the via hole or the pad open area by the protective oxide film while removing the polymers by using HF,

wherein DIW occupies by volume about 70.5% to about 80.5% of the total volume of DIW, H_2SO_4 , H_2O_2 and HF, H_2SO_4 occupies by volume about 6.5% to about 8.5% of the total volume of DIW, H_2SO_4 , H_2O_2 and HF, H_2O_2 occupies by volume about 15% to about 19% of the total volume of DIW, H_2SO_4 , H_2O_2 and HF, and HF occupies by volume about 50 PPM to about 150 PPM of the total volume of DIW, H_2SO_4 , H_2O_2 and HF, and wherein the total volume % of DIW, H_2SO_4 , H_2O_2 and HF is about 100 %.

10. (Canceled)

11. (Currently amended) The method of claim [[10]] 2, wherein DIW occupies by volume about 75.5% of the total volume of DIW, H_2SO_4 , H_2O_2 and HF.

12. (Canceled)

13. (Currently amended) The method of claim [[12]] 2, wherein H_2SO_4 occupies by volume about 7.5% of the total volume of DIW, H_2SO_4 , H_2O_2 and HF.

14. (Canceled)

15. (Currently amended) The method of claim [[14]] 2, wherein H_2O_2 occupies by volume about 17% of the total volume of DIW, H_2SO_4 , H_2O_2 and HF.

16. (Canceled)

Atty. Docket No. PIA31180/DBE/US
Serial No: 10/750,248

17. (Withdrawn) An apparatus of manufacturing a compound for removing polymers generated during etching processes, comprising:

tanks in which DIW, H_2SO_4 , H_2O_2 and HF are stored, respectively;

a main tank for mixing DIW, H_2SO_4 , H_2O_2 and HF supplied from the respective tanks through supplying tubes respectively connected between the main tank and the tanks;

flow control devices for controlling flow rates of DIW, H_2SO_4 , H_2O_2 and HF, which are respectively installed to the supplying tubes; and

a pump for circulating a mixture of DIW, H_2SO_4 , H_2O_2 and HF stored in the main tank in order to make the mixture uniform.